

SYSTEM AND METHOD FOR ENERGY EFFICIENT DATA PREFETCHING

ABSTRACT OF THE DISCLOSURE

5 A computer system uses a prefetch prediction model having energy usage parameters to predict the impact of prefetching specified files on the system's energy usage. A prefetch prediction engine utilizes the prefetch prediction model to evaluate the specified files with respect to prefetch criteria, including energy efficiency prefetch criteria, and generates a prefetch decision with respect to each file of the specified files. For each specified file for
10 which the prefetch prediction engine generates an affirmative prefetch decision, an identifying entry is stored in a queue. The computer system fetches files identified by entries in the queue, although some or all of the entries in the queue at any one time may be deleted if it is determined that the identified files are no longer likely to be needed by the computer system.

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